DOCUMENT RESUME

ED 338 507 SE 052 622

TITLE	Office of Environmental Education. 1991 Progress Report.
INSTITUTION	Environmental Protection Agency, Washington, DC. Office of Environmental Education.
PUB DATE	Feb 91
NOTE	24p.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Curriculum Development; Elementary Secondary Education; *Environmental Education; *Federal Legislation; Higher Education; Internship Programs; Outreach Programs; Program Development; Program Implementation
IDENTIFIERS	Environmental Action; *Environmental Education Programs; Environmental Law; Environmental Literacy; *National Environmental Education Act 1990

ABSTRACT

As improvements in environmental protection become more dependent upon the activities of individual citizens, so grows the need for an environmentally literate citizenry. The stated goal of the Office of Environmental Education is to instill in students a sense of concern for, a mutual dependence upon, and an intimacy toward the natural environment. This document is split into three sections. The introduction, part I, contains the background against which both the Office of Environmental Education (OEE) and the National Environmental Education Act (Public Law 101-619) were established. Part II describes the list of activities proposed for OEE, including: actions and responsibilities mandated by public law; efforts for environmental education curriculum development and enrichment; increased promulgation of environmental information; collaboration on environmental issues with other federal agencies; special outreach efforts to specific target audiences including minorities, urban poor and Native Americans; and promotion of Youth Environmental Action Forums and awards. Part III contains an outline for implementation of programs, including: environmental education and training programs for teachers and other educational professionals; grants programs to higher education research concerning environmental education projects; dissemination of federal government internships and college fellowships for inservice teachers; an awards program to recognize outstanding contributions of individual teachers and schools, as well as reward creative approaches to environmental education programs; and, facilitation and coordination of private gifts and endowments earmarked for environmental education activities. (JJK)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

United States
Environmental Protection
Agency

Communication And
Public Affairs
(A-107)

21K-1002
February 1991

EPA

Office Of Environmental Education

1991 Progress Report

ED338507

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Printed on Recycled Paper

BEST COPY AVAILABLE

ED052622

1991
Progress Report
from the
Office of
Environmental Education

Contents:

I Introduction Page 3
- Background -- 4
- EPA Task Force -- 4
- EPA Environmental Education Strategy -- 5
- Federal Scientific Workforce -- 5

II EPA Education Activities Page 7
- Environmental Education Office -- 7
- Environmental Education Curricula -- 9
- Educational Information Clearinghouse -- 10
- Federal Program Liaison -- 10
- Targeted Outreach Efforts -- 11
- Children at Risk -- 12
- Educational Community Outreach -- 13
- Youth Environmental Action Forum -- 14
- President's Environmental Youth Awards -- 15
- Cooperative Projects -- 15
- EPA's Regions -- 16

III Implementing the Law Page 18
- Education and Training Program -- 19
- Grants Program -- 19
- College Internships -- 20
- Environmental Education Awards -- 20
- Education Advisory Council -- 21
- Environmental Education Foundation -- 22
- Fiscal Year 1991 Milestones -- 22

IV Conclusion Page 22

I. Introduction

This report represents the Environmental Protection Agency's (EPA's) response to the requirement found in the fiscal year 1991 House and Senate Appropriations report language. Senate Report #101-474 accompanying PL 101-507 requests that EPA provide a progress report on the activities of the Agency's new Office of Environmental Education.

This document begins with the background against which both the Office of Environmental Education and the National Environmental Education Act were created. Next it provides details on the development of an organizational infrastructure and professional network for the Office of Environmental Education and on the recent achievements of the EPA in environmental education. Finally, it sets forth the specific requirements of the National Environmental Education Act, and indicates how the Office of Environmental Education plans to, is, or has responded to each requirement.

At the time of this report, the Office of Environmental Education (OEE) is only four months old, and there is considerable progress to report. Two months ago, on November 16, 1990, President Bush signed into law the National Environmental Education Act (PL 101-619).

If talent, energy and enthusiasm are any indicator, then EPA's environmental education effort is off to an excellent start. In a factual document such as this it is not always easy to convey the sense of enthusiasm and commitment with which EPA has launched its environmental education office. The funding and workyears to support the office will not be appropriated until fiscal year 1992. In the meantime, however, the office is staffed with some of the most talented people in the Agency, most of them on temporary detail from other offices within the Agency.

As improvements in environmental protection become more dependent upon the activities of individuals, so grows the need for an environmentally literate citizenry. Mounting efforts to rectify past environmental problems and to develop future protective technologies will also increase demand for people entering the environmental profession. The future of both the environment and the economy depends upon the quality of future scientific, technical, and liberal arts students. The need for environmentally literate citizens, backed up by a solid core of skilled specialists in the environmental sciences, is clear.

The goal of the Office of Environmental Education is simple: to foster in students a sense of concern for, mutual dependence upon, and intimacy toward, the natural environment. Hence, to instill an environmental ethic that will help guide individuals to make responsible decisions on issues and activities which have an effect upon the environment.

Background

Environmental education is not a new subject with EPA. In its early days, EPA launched a number of programs to improve public awareness of environmental issues. In addition to dozens of publications on issues from municipal dumps to the safe use of pesticides, EPA sponsored the Documerica project whereby dozens of leading photographers snapped images of the nation's environment in both its pristine best and its contaminated worst.

Recently, the Agency has made an important commitment to increase its emphasis on environmental education activities. One of the major mechanisms to increase this emphasis is the National Advisory Council for Environmental Policy and Technology's (NACEPT's) Subcommittee on Environmental Education and Training. This subcommittee brings together educators, corporate executives, researchers and state, local and Federal environmental officials to advise EPA on environmental education and training policies and activities. The subcommittee sponsored the *Planet at Risk* series of public hearings on environmental education.

Recognizing the need to both focus and augment its efforts in this regard, in November 1989 the Administrator established an internal Environmental Education Task Force.

EPA Task Force

This task force drew members from throughout the agency, the EPA regions, and laboratories. Its mandate was to both review current Agency environmental education activities and develop a coherent strategy for meeting future environmental education needs to be implemented by the new Office of Environmental Education. The resultant strategy represents both a consensus within the Agency and input from the full range of Agency intellectual resources which the Agency can bring to bear on environmental education activities.

EPA Environmental Education Strategy

Even before passage of the National Environmental Education Act, the EPA was soliciting comment from outside of the Agency about its strategy for responding to many of the requirements of that Act. A draft *EPA Environmental Education Strategy* was first issued in the summer of 1990 and has been distributed to more than 1,000 interested individuals and organizations for review. Comment period on the strategy ends January 31, 1991. Shortly after that date, the Agency's Office of Environmental Education will consolidate the comments received, incorporate as many of the suggestions as is feasible, and release the final strategy document. The final document will:

--Highlight areas where the Agency can, and cannot, apply increased energy to support improved environmental education activities;

--Provide to other Federal Agencies a clear delineation of EPA's intentions in the environmental education arena and serve as a coordinative mechanism for Federal programs; and

--Represent a "living document" intended to grow and change as need for environmental education skills and tools evolves.

Federal Scientific Workforce

Like other regulatory agencies, the quality of EPA decisions depends upon the quality of our science. Currently EPA is facing a critical shortfall in its technical workforce early in the 21st century. Impending shortages of scientists and engineers, compounded by the relative absence of women and minorities in these fields, threaten to compromise the Federal Governments ability in general, and science-dependent organizations such as the EPA in particular, to effectively deal with important environmental problems.

This Agency is especially vulnerable to such constraints. More than two-thirds of the Agency workforce has at least a bachelor's degree. This is more than twice the Federal average. Fully one-third of the 15,000 Agency employees are scientists and engineers, and this proportion has remained steady for years. Given an annual turnover of more than 11 percent, and the fact that the average age of these scientific and engineering employees is more than 50 years (overall Agency average is 39), the Agency faces replacing nearly its entire compliment of scientists and engineers within this decade.

The Agency has no need for additional reminders that it is in our most profound interest to stimulate, to the limits of our capabilities, greater interest in the sciences and engineering. For this and other reasons, EPA has been an active and enthusiastic participant in the Federal Coordinating Council on Science, Engineering and Technology (referred to as FCCSET) Committee on Education and Human Resources. This committee was created to increase the spirit of interagency cooperation and assist in meeting the expected shortfall in qualified scientific and technical professionals.

EPA interests coincide with those set for the Federal government-wide effort: improve education in the environmental sciences for grades kindergarten through 12; foster an environmental ethic among all citizens; better inform public, business and government decision-makers on environmental sciences; and, foster interest in careers in environmental sciences among the nation's students. The Office of Environmental Education has participated in all of the Committee on Education and Human Resources' planning meetings, and has enthusiastically supported the potential for coordinated, multi-dimensional cooperation in science and technology education.

In addition to EPA's participation on the Human Resources Committee, also under the FCCSET umbrella, EPA cooperated in developing the Global Change Research Program. This program, which is central to many of the most important environmental policy issues of the day, was organized to coordinate global research being conducted by a number of Federal Agencies, including EPA.

EPA brings to science and technology education the resources of 5,000 scientists and engineers and 12 national research and development laboratories nationwide. As you will see in the next section of this report, these resources are already being applied to a wide range of pre-college and university science education efforts. These efforts to support environmental education are set within the larger federal initiative in science and technology education. EPA efforts are part of a coordinated, Federal-wide initiative to improve both science and technology education and literacy by the turn of the century.

II. EPA Education Activities

In a June 1990 address entitled *Environmental Literacy in the 21st Century*, Administrator Reilly announced his intent to create, within EPA's Office of Communications and Public Affairs, an Office of Environmental Education. The new office is to bring into focus a number of scattered programs within the Agency and coordinate with similar activities in other Federal agencies, State and local governments, and the private sector.

A few months after this announcement, Congress passed the National Environmental Education Act, which calls for EPA to establish such an office. The office was formally created on September 17, 1990.

From its inception, the Office of Environmental Education has emphasized the creation of links with existing networks of environmental educators, information developers, and students involved in designing EPA's environmental education agenda. In short, if the activities of the new Office are not directly useful to these constituencies, then there is little rationale for their pursuit. In addition, the energies of all sources -- Federal, state, academia, professional associations, industry, and public interest organizations -- are needed to meet the challenges ahead.

Only through cooperative efforts and partnerships will we be able to accelerate the development and implementation of environmental education programs, individual environmental awareness, and the development of a more scientifically and technically literate workforce.

Hence, a great deal of the Office of Environmental Education's efforts over its first three months has been aimed at developing a network of strong interrelationships between itself and its various constituencies. To date, the Office of Environmental Education has hosted or attended no fewer than 100 meetings with individuals and organizations involved and interested in environmental education.

As an example of the outreach effort, one of the Office of Environmental Education's initiatives will be to sponsor, in cooperation with other Federal Agencies, an Environmental Education Colloquium in 1991. The Colloquium will help the Office of Environmental Education to refine its role within the overall environmental education effort, to create a broad-based exchange of ideas within the federal environmental education community, and to forge links with external organizations and institutions.

While not intended to produce a formal set of recommendations, the Colloquium will provide a forum which will ultimately benefit the effective implementation of the National Environmental Education Act. It is part of the substantive collaboration among the major actors in environmental education and expands upon the FCCSET initiative. Of course, the near-term priorities of the Office of Environmental Education which are listed below can be expected to change over time in response to an evolving set of needs.

EPA Office of Environmental Education responsibilities:

--Establish, maintain, and disseminate a clearinghouse of information about available and planned multimedia environmental education products.

--Identify gaps in existing environmental education materials and then work in collaboration with academia, other agencies, private industry and public interest groups to fill these gaps with quality products.

--Establish an Environmental Education and Training Grants Program through a grant awarded to a consortium of universities to support the training of education professionals in teaching environmental issues.

--Establish an Environmental Education Grants program to support the design, demonstration and dissemination of environmental education materials, practices or techniques.

--Provide for environmental internships through post-secondary level studies with agencies of the Federal government.

--Establish a National Environmental Education Advisory Council to advise, consult with, and make recommendations to the Administrator on matters relating to environmental education activities, functions, and policies of the Agency.

--Establish an Environmental Education Foundation.

--Establish the EPA as the key source for Federal, national and international communication and cooperation in environmental education activities.

--Coordinate and track EPA environmental education efforts.

Activities of the Office of Environmental Education are currently organized according to the following functional areas: multimedia product development, academic programs, information clearinghouse, and youth programs.

Multimedia Product Development activities include cooperative development -- with other Agency offices, public, private, academic and foreign organizations, and other Federal agencies -- of needed environmental education materials. Efforts will be coordinated with the awards program called for in Section 7 of the National Environmental Education Act, and with the National Advisory Council for Education and Technology, and the Office of Pollution Prevention.

Academic Programs include management of Federal grant assistance to local educational agencies, institutions of higher education, and other not-for profit organizations as provided for under Section 6 of the National Environmental Education Act. It also involves administration of the environmental internship program mandated in Section 7 of the Act.

Education Information Clearinghouse activities include identification and tracking environmental education information products and activities which exist, are in development or are needed to fill gaps which have been identified by the multimedia product development process described above. Functions include coordinating with other Federal agencies, private, public, academic and foreign organizations, advising EPA senior management on the Agency's multimedia products, policies, and working closely with all similar external activities to ensure that the information is both deliverable and useful to the ultimate user -- the environmental educator.

Youth Programs includes management of the EPA youth and scholars programs, the President's Environmental Youth Awards program, and coordination of activities regarding the Environmental Youth Forum and the Target Schools programs.

While only a few months old, the Office of Environmental Education has initiated an impressive outreach program. The purpose of this program is two-fold. First, to identify where this office should consolidate and focus its energies, and, second, to provide environmental educators and other interested parties with a mechanism for effective information exchange.

Environmental Education Curricula

The National Environmental Education Act seeks to enhance environmental education by fostering collaboration between the Federal government and existing institutions such as the media, private industry, schools, museums, libraries, parks, and recreation facilities. The goal is to foster an environmentally sensitive public that better understands and appreciates the impact that people have on the environment and the importance of environmentally responsible decisions in both personal and professional milieu.

EPA's Office of Environmental Education will pursue cooperative efforts among Federal and state agencies, academia, private sector, public interest groups and other concerned organizations worldwide to accelerate the development and implementation of effective environmental education programs.

Educational Information Clearinghouse

One high priority is to develop and make available, in readily useful form, information about multimedia environmental education products, curricula and techniques. This involves an effort to tie diverse sources of information about environmental education into a source which serves the needs of the educational community. Gaps in available educational materials will be identified and filled. Working with other agencies and private industry, EPA has launched curricula development efforts and is investigating alternative designs for an environmental information clearinghouse.

Current networks and clearinghouses of environmental information, such as the Educational Resources Information Center and the Association for Environmental Education's National Network for Environmental Education, are oriented to supporting teachers who already have the interest, initiative, scientific literacy, personal time and, in some cases, money to use them. In addition, much of the teaching material which presently exists tends to focus on a specific environmental issue or topic. Little is geared to promoting broader and more basic scientific and environmental literacy. Even less is tailored to fit into the most popular curriculum categories currently in use or geared to be incorporated into the teaching of other subjects such as mathematics, language skills and art.

In the specific area of pollution prevention, EPA has a major *National Pollution Prevention Environmental Education Project* directed by representatives from each of the Agency's ten regional offices along with the Office of the Administrator and the Office of Pollution Prevention. This two-year project has the ultimate goal of producing pollution prevention education materials for teachers and students. In addition, each of EPA's ten regions supports an environmental education effort tailored to the specific needs of that region.

Federal Program Liaison

To date, members of the Office of Environmental Education have met with representatives of the other Federal agencies involved in environmental education. One of the first products of this coordination is a Memorandum of Understanding on environmental education activities signed on November 20, 1990, by the Administrator of the EPA and the Secretary of the Department of Energy.

The Memorandum of Understanding is directed at encouraging more U.S. students to pursue careers in environmental and energy-related scientific and

engineering fields. In addition, it calls for efforts to raise the general level of public understanding of energy and environmentally related issues and concerns.

The memorandum will enable the two agencies to work in collaboration to enhance their individual efforts by strengthening ties between existing programs that are related to national needs and by developing new cooperative educational efforts in areas of mutual interest. The director of the EPA Office of Environmental Education and the director of the DOE Office of Energy Research will be responsible for the oversight and implementation of the agreement within their respective agencies.

In addition, in October 1990, the Office of Environmental Education played a significant role in the *1990 Presidential Awards for Excellence in Science and Mathematics Teaching* sponsored by the National Science Foundation.

Targeted Outreach Efforts

The Office of Environmental Education is participating in a number of special efforts to reach specific target audiences including minorities, urban poor and Native Americans.

Perhaps due to a need for greater concern for more immediate problems, minorities have traditionally been underrepresented in both environmental profession and environmental education. EPA has taken steps to help rectify this situation.

In June 1990, Administrator Reilly created the Minority Academic Institutions Taskforce to plan implementation of the April 1990 recommendations of the Administrator's Workshop on Women, Minorities, and Handicapped in Science and Technology. These recommendations were, in turn, in response to the December 1989 report *Changing America: The New Face of Science and Engineering* produced by the President's Task Force on Women, Minorities and the Handicapped in Science and Technology.

The EPA taskforce included the director of the Office of Civil Rights, key executives from the regions and headquarters offices, and representatives from major academic institutions. The recommendations of this taskforce focus on how EPA can better support minority academic institutions of higher education to ensure that a cadre of qualified scientists and engineers be available to meet future demands.

Recommendations of the Minority Academic Institutions Task Force are that EPA:

-- Work with minority higher education institutions to make environmental science courses core components of liberal arts and technical degree programs.

-- Coordinate its efforts to increase interaction between EPA scientists and the students and teachers at nearby minority academic institutions, and that EPA encourage its employees to teacher and mentor at minority academic institutions.

-- Establish a formal National Research Scholars Program in Environmental Sciences which focuses on minority institutions.

-- Forge additional ties with industry and universities to organize environmental activities on minority academic institution campuses.

-- Launch a coordinated effort to inform the public concerning EPA activities and to attract students into environmental curricula.

-- Create more effective recruitment aimed at attracting more minority students.

-- Expand its current support programs to include an environmental sciences/Natural resource management fellows program.

-- Establish partnerships with minority academic institution faculty in an effort to enhance the exchange of personnel.

--Expand its scholarships and augment research grants to minority academic institutions.

EPA's new Office of Environmental Education will be held accountable for seeing to it that the Agency responds effectively to the major recommendations of the task force. In fact, next fiscal year the Office of Environmental Education is expected to assume Agency-wide responsibility for implementing the recommendations of EPA's Minority Academic Institutions Task Force. Thus, not only will responsibility for coordinating our environmental education be focused on the new office, but that role will also include overall responsibility for seeing that those educational opportunities are designed with outreach to minority individuals and institutions in mind.

Children at Risk

The Office of Environmental Education is working with several Historically Black Colleges and Universities to encourage their efforts to develop environmental programs and to determine how best to use anticipated resources to support such efforts. In addition, the Office of Environmental Education has forged links with such dynamic and creative organizations as the *Natural Guard*. The *Natural Guard*, an organization founded by Richie Havens, works directly in the neighborhoods to involve the often alienated urban poor in creative projects to improve their local environment.

For the poor, especially the urban poor, the environment is often a rather unappealing place. As urban poor children grow into adults, their lack of positive experiences with nature can result in a profound indifference toward environmental issues. Through meetings with groups such as the District of Columbia Schools, the Natural Guard, Earth Corps, etc., the Office of Environmental Education has begun to develop a number of potentially important initiatives which will help to ensure that the children develop a positive sense of interest in protecting their natural environment.

Some of the most insightful writings on the meaning of the natural environment come from great Native American intellectuals such as Chief Seattle and Black Elk. Native American cultures have much to teach others about reverence for the land. In addition, they themselves can benefit from the technical and scientific environmental knowledge which others can provide.

The Office of Environmental Education has also made provisions to include the concerns of, and support for, Native Americans in its planning. The head of the Office of Federal Activities, which oversees EPA-Tribal interactions, has agreed to serve on the internal Environmental Education Advisory Board, and Office of Environmental Education staff briefed the EPA Interagency Indian Environmental Discussion Group with regards to the National Environmental Education Act and planned activities. It is the intent of the Office of Environmental Education to ensure adequate representation for Native Americans on the Environmental Education Advisory Council as well.

Educational Community Outreach

The Office of Environmental Education is 'the new kid on the block' with regard to its mission. For a decade or more, dedicated teachers and artists have been working to improve the environmental literacy of our citizens. The clear mandate of the Office of Environmental Education is to rely upon the expertise of these individuals to ensure the relevance and utility of its activities.

In addition, the Office of Environmental Education has been working with organizations such as *Project Wild* and *Project Learning Tree*. OEE has also developed a productive working relationship with the North American Association of Environmental Educators whose membership includes environmental educators throughout the United States, Canada, and Mexico.

Among EPA's ongoing education outreach programs is the Pollution Prevention Education program which intends to allocate resources in fiscal year 1991 in grants to local and state groups. The program will support development of

primary and secondary school curricula and other environmental education efforts with an emphasis upon the prevention of polluting activities. Another project, the National Network for Environmental Education Centers, is being supported in cooperation with the Tennessee Valley Authority and the Alliance for Environmental Education. This program supports a network of regional environmental education centers for teacher training, research and community outreach. EPA also has cooperative education agreements with 64 colleges and universities under which up to 200 students per year work at Agency regions or laboratories as part of a formal degree program. This program is an integral part of efforts to recruit the best and brightest students for a career in environmental science including EPA.

EPA supports the Federal Junior College Fellowship Program whereby approximately 150 students receive fellowships annually for work-study towards bachelor's or associate's degrees. At the graduate level, the EPA-supported National Network for Environmental Management Studies supports students through master and doctoral research in areas of priority concern to the Agency in environmental science, policy and management. In the past three years, this program alone has funded more than 190 projects/fellowships at more than 40 universities nationwide.

Youth Environmental Action Forum

In May 1990, several of the individuals who later joined the OEE helped to make the first International Youth Environmental Action Forum a success. The forum promotes elementary and secondary student participation in environmental projects. At the forum, which was co-sponsored with the National Governor's Association, with major participation from the Departments of Energy, Agriculture, Interior, Commerce's National Oceanic and Atmospheric Administration, and from private industry, young people from 19 countries and 47 states met for 3 days and exchanged information about effective environmental action. The forum, which included high school students, teachers and state environmental education coordinators, also developed detailed action plans for projects to be implemented in the local community when the students returned home.

The individuals who participated in the forum provide a solid core of people who are willing and able to take appropriate action to improve and protect their environments. It is our intent to expand the impact of the forum by encouraging parallel programs at the Regional level with a national event every other year. The next international forum will be held in 1992.

President's Environmental Youth Awards

Among the first accomplishments of this new office was the recent Presidential Environmental Youth Awards ceremony held at the White House on November 14, 1990. At that ceremony, young people from around the country gathered to be honored by the President for their role in launching projects which have led to considerable environmental improvement. This was the second year in a row that the winners received their awards directly from the President.

Award winners this year included a project to save the rainforest conducted by members of the Uxbridge High School Student Council in Uxbridge, Massachusetts. In addition to petitioning the United Nations to protect rainforests, the students raised funds to purchase and preserve valuable rainforest land in Belize. Another youth award winner, a student from Port Neches, Texas, helped to launch a major recycling program, and a student from Fallon, Nevada, conducted research which led to significant improvements in water quality at the ecologically threatened Stillwater National Wildlife Refuge.

Reflecting the increased public awareness of environmental issues, one of this year's award-winning projects, the Protect Our Planet Calendar produced by middle school students from The Philadelphia School in Philadelphia, Pennsylvania, was extensively covered by the national media.

The winners of Presidential Awards are only the tip of the iceberg with regards to the entire youth awards program. Prior to selecting national winners, each of EPA's ten regions conducts its own competition and selects regional award winners. The Regional Administrators then select one winner to represent that region's best. That winner is invited to the ceremony at the White House.

Cooperative Projects

There are dozens of public interest groups and private corporations which are devoting considerable energy and resources into environmental education projects. The new Office of Environmental Education is working with several of these organizations in cooperative projects.

For example, early in 1990 General Motors Corporation approached EPA concerning a project to produce an environmental education video and teacher's guide for distribution to every elementary school in the nation. A team of GM and EPA technical personnel worked together to define the project, and EPA

provided both technical review for the project contents and wrote most of the accompanying teachers guide. The resultant package was distributed, free of charge, by General Motors to 72,000 elementary schools.

Subsequently, in cooperation with the U.S. Information Agency, the video was translated into Hungarian for the opening of the new Eastern and Central European Regional Environmental Center in Budapest. This Center, which was proposed by President Bush in 1989, will help to strengthen emerging democratic trends in the region by assisting private environmental groups. The video package is also being used in Poland to teach English to environmental scientists. It is being translated into Spanish and has already won two major awards for video productions.

The experience with this project has become a prototype for future cooperative efforts between EPA and external organizations which benefit both groups and result in far more effective environmental education products.

EPA's Regions

Much of EPA's environmental education effort is managed by the Agency's ten regions. Within the past year, the EPA regions have supported more than 60 major educational projects which support the goals of the National Environmental Education Act. A sampling of these projects follows:

-- Most of our regions are producing directories and guides to help the public to locate environmental education resources within the region. Our Seattle office, for example, produced an *Environmental Education Resources Directory -- 1990* which includes the names, addresses, telephone numbers and short descriptions of more than 150 regional, state, local, municipal, private and public interest organizations having major environmental education activities. This same regional office also produces a compact guide of access numbers for business and environmental education which can be a valuable asset to educators seeking environmental information relevant to their specific local concerns.

-- A number of regions have anticipated the requirements of the new National Environmental Education Act by establishing in-house environmental education advisory councils. Our Denver office, for example, has such a council and has also established a 59-member speakers bureau. Each of the EPA speakers works with the same students and teacher throughout the year to provide whatever environmental input is desired.

-- An additional effort to support environmental educators is being conducted with EPA support through the Colorado Alliance for Environmental Education and the state department of Education. This Project, entitled Directory of Environmental Education Resources, involves a statewide computer database of environmental education resources. The database is accessed through local libraries, colleges and personal computers. The system will include more than 200 environmental education programs, in abstract format, and will be available through 50 libraries and colleges throughout Colorado.

-- Several of the regions also have aggressive outreach programs to train school administrators and district science coordinators in major environmental themes. Our Dallas office, for example, is conducting a series of training seminars on model recycling programs and how to incorporate source reduction and recycling into the science curricula through a multi-media approach involving art, science, mathematics and language. The same region is also providing technical support to Southern Methodist University in developing a hazardous waste masters degree program, and intends to work with officials of the University of Texas at El Paso on a similar initiative.

III. Implementing the Law

In both tone and structure, the National Environmental Education Act demands that EPA make every effort to link into, and rely upon, the existing network of environmental educators and education resource developers for guidance and cooperation. Much of the early days of the Office of Environmental Education has been invested in identifying and forging solid relationships with interested organizations, both within and outside of government.

In an additional effort to reach out to all individuals and organizations involved in environmental education, the Office of Environmental Education is also creating a quarterly periodical *Education Notes* newsletter. This journal will serve to both inform interested outside parties concerning Office of Environmental Education activities and to solicit their advice and experiences to share with other members of the community.

Education & Training Program

As directed in the NEEA, we are developing standards and procedures for selecting and awarding a major grant to a consortium of universities to implement an environmental education and training program nationwide. This program is aimed at teachers and other educational professionals, and will enhance their skills with environmental subjects. Because of the central role of this program in the implementation of the Act, we will award the grant after a rigorous competitive process which will require the broadest range of technical talent and outreach experience of the winning grantee.

Grants Program

The National Environmental Education Act provides for grants of up to $250,000 each to support promising environmental education projects to higher education and/or not-for profit research institutions. The Act also requires that 25% of the grants awarded be for $5,000 or less. Such smaller grants can make a big difference to the scope and success of locally initiated environmental projects.

There is a considerable lack of educational materials and trained educators to teach environmental concerns to students in kindergarten through twelfth grade. Whereas environmental issues pervade every aspect of their daily lives

and environmental protection efforts will determine the habitability of the planet they will inherit, few students receive even a rudimentary grasp of key concepts in environmental science, ethics, health or related social sciences. Without an understanding of the environmental consequences of human enterprises, future leaders risk making decisions which compound the economic, ecological, and aesthetic losses caused by environmental contamination.

The situation is equally problematic at the college and university level. For example, half of the senior scientific and technical staff of EPA will reach retirement age during this decade. The demographics of the workforce will contribute to an increasing shortage of environmental professionals at a time when the need is greatest.

The Office of Environmental Education has begun developing the criteria and procedures which will regulate the grants program. These criteria and procedures will be in place by early Summer 1991, to be ready to award grants once funds are appropriated.

College Internships

The new law calls for the creation of a major internship program and fellowships for in-service teachers. This effort will place up to 250 interns and 50 fellows per year in environment-related positions within the Federal Government. The Office of Environmental Education will work with the newly created Federal Task Force to implement this section of the National Environmental Education Act. Criteria for this program is currently under development.

Environmental Education Awards

The new law requires that EPA provide for National awards recognizing outstanding contributions to environmental education. This national awards program will build upon the success of the President's Environmental Youth Awards program. EPA's portion of the program will recognize individuals of national achievement and stature. For example, as called for in the National Environmental Education Act, this award program shall include:

-- *Theodore Roosevelt Award* for an outstanding career in environmental education, teaching or administration;

-- *Henry David Thoreau Award* to an outstanding contribution to literature on the natural environment and environmental pollution problems;

-- *Rachael Carson Award* for contributions in print, film, or broadcast media to public education and information on environmental issues or problems;

-- *Gifford Pinochot Award* for outstanding contribution to education and training concerning forestry and natural resources management, including multiple use and sustained yield lands management.

The Environmental Education Act authorizes the Chairman of the Council on Environmental Quality, on behalf of the President, to develop and administer an awards program to recognize elementary and secondary education teachers and their local educational agencies who demonstrate excellence in advancing environmental education through innovative approaches.

Because of the relative newness of environmental education in most curricula, there is a major opportunity for, and serious need of, creative approaches to conveying major environmental themes within various academic and informal educational contexts. Among the major goals of the awards program are to both recognize the contributions of individual teachers and schools, and to foster creative approaches to environmental education problems. These approaches can then be applied to other areas throughout the nation.

Education Advisory Council

One of the most important aspects of the Environmental Education Act is that it provides for a mechanism whereby our programs can be shaped to fit the needs of front-line environmental educators. As called for in the Act, The National Environmental Education Advisory Council and a Federal Task Force on Environmental Education will consult with, and make recommendations to, the Administrator on matters relating to activities, functions, and policies of the Agency under the Act.

The Advisory Council shall consist of 11 members appointed by the Administrator after consultation with the Secretary of the Department of Education. Members shall be drawn from primary, secondary and college-level educators, not-for-profit organizations, State departments of education and natural resources, and the business community.

In addition, EPA is creating an internal advisory board to help design and implement its program. EPA's implementation of the Environmental Education Act will be determined by the guidance provided to the Agency by the educational community.

Environmental Education Foundation

The National Environmental Education and Training Foundation called for in Section 10 of the Act will facilitate and coordinate contribution of private gifts for the benefit of environmental education activities. The Foundation will also participate with foreign governments to further environmental education and training worldwide, foster an open and effective partnership among all entities involved, and stimulate environmental awareness.

The Administrator has invited all of those interested in the Board to submit their credentials to EPA. The Administrator will announce, in the Federal Register, appointments of directors to the Board in 1991. The Board will adopt a constitution and bylaws consistent with the purposes and provisions of the National Environmental Education Act, and shall appoint officers and employees of the Foundation. In addition, as noted in the President's signing statement on the National Environmental Education Act, the Administration will submit legislative language to correct provisions in the Act related to the Environmental Education Foundation and the Advisory Council that raise constitutional questions.

FY 1991 Milestones

Due to the urgency of the need and the high level of demand for results, the Office of Environmental Education is committed to a number of accomplishments prior to the end of fiscal year 1991. By October 1, 1991, EPA plans to have the following processes, structures and programs operational and ready to support full implementation of the National Environmental Education Act:

-- A fully operational Environmental Education Advisory Council and Federal Task Force.

--An active internal EPA Environmental Education Advisory Board.

-- An interagency environmental education colloquium.

-- A prototype environmental education information clearinghouse including information on all related EPA activities and products.

-- Criteria and procedures for applying to, and selecting winners of, national environmental education grants.

--- Procedures for awarding National Environmental Education Awards.

-- Procedures for selecting and awarding a major grant to support the Environmental Education and Training Program.

IV Conclusion

Sustained environmental improvement requires more direct involvement on the part of the general public, both in terms of personal behavior and in terms of the impact of professional actions on the environment. This, in turn, requires a better informed and better motivated generation of young people who will implement the environmental ethic in their daily lives and be better prepared for careers in which the environment plays an increasingly important role. The greater the individual's commitment to environmental protection in daily activities, the less of a burden formal environmental protection programs will pose on our regulatory, governmental and economic structures.

The Office of Environmental Education faces a tremendous task. The platform EPA is constructing will serve well to support a successful and effective program to implement the National Environmental Education Act. Relying upon the good counsel of many groups, especially those of Congress and Congressional staff, the Office of Environmental Education will continue to craft a leadership role as envisioned in the National Environmental Education Act. Both that role, and the other requirements of the Act, will be firmly in place by the start of fiscal year 1992.

EPA
United States
Environmental Protection
Agency
(A-107)
Washington, DC 20460

Official Business
Penalty for Private Use
$300